



GOLD COAST COLONY

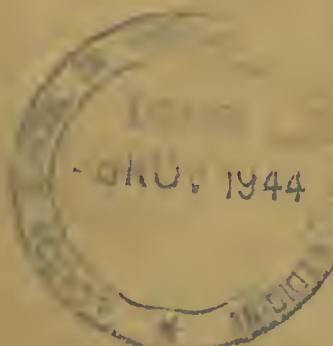
# Report

on the

# Medical Department

for the year

1943



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## CONTENTS

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### I—PUBLIC HEALTH

	<i>Paragraphs</i>
I. Summary of important events ... ... ... ... ...	1-22
II. Important diseases treated during the year ... ... ... ...	23-45
III. Vital Statistics	
(I) General Population ... ... ... ...	46
(II) General European Population ... ... ... ...	47
(III) Official African Population ... ... ... ...	48
IV. Hygiene and Sanitation	
Labour conditions ... ... ... ...	49
Housing and town planning ... ... ... ...	50
Sewage disposal ... ... ... ...	51
Refuse disposal ... ... ... ...	52
Water supplies ... ... ... ...	53
Food in relation to health and disease ... ... ... ...	54
Mosquito control ... ... ... ...	55
School Hygiene ... ... ... ...	56
Vaccination ... ... ... ...	57

### II—SPECIAL SERVICES

V. Port Health and Air Traffic ... ... ... ...	58
VI. Maternal and Child Welfare ... ... ... ...	59
VII. Hospitals, Dispensaries, Laboratories, etc. ... ... ... ...	60-64
VIII. Training of Medical and Health Personnel ... ... ... ...	65-72

### III—FINANCE ... ... ... ...

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73-74

# Annual Medical Report for the Year 1943

10.10.1944

## I—PUBLIC HEALTH

### (I) GENERAL

Although eight European and twenty-one African officers of the Medical Department were released from the Army, all have not yet returned to their civilian duties. In addition, some who were released from the Army had to be employed in important work connected with the prosecution of the war and were, therefore, not available for the routine work of the Department. The standard of work of both the Medical and Health branches has however been, generally, maintained at its pre-war level.

2. As a result of the shortage of staff nine hospitals have been without resident medical officers and were run with a skeleton staff more on the lines of a dispensary, but containing beds for emergencies. These hospitals were visited as often as possible by Medical Officers who can be summoned in the event of an emergency. Several Village Dispensaries, instead of having resident dispensers, were visited at short intervals by visiting dispensers ; this procedure however, has only been introduced in places where the number of attendances did not justify the retention of resident dispensers. By these means, staff has been made available for important war projects and for relief purposes.

3. Drugs, dressings and equipment were available in satisfactory quantities, and were obtained in the Bulk Indent for the Gold Coast. Many articles increased in price, and, in addition, 12½ per cent handling charges have had to be paid towards the cost of the Bulk Depot in the Gold Coast. Certain drugs were no longer obtainable ; in this category quinine is the outstanding example. Mepacrine, however, was used as a substitute and has been found to be effective in a suppressive as well as a curative capacity. Although there was unavoidable delay in the receipt of medical supplies, sufficient stocks have now been built up to ensure a reasonable issue of all essential items for the treatment of patients in Government Hospitals and, in consequence, the activities of the Medical Department have not had to be curtailed on this account.

4. During 1943 the Senior Pathologist, five Medical Officers, a Medical Officer of Health and one Sanitary Superintendent were released from the Army and resumed duty. Two of the Medical Officers and the Medical Officer of Health, however, were deviated immediately for special work in connection with the war effort and were not available for routine duties. In addition to the foregoing, one Dispenser, one Senior Mental Nurse and nineteen Second Division Nurses were released from the Army. Again, some of these officers were deviated to special duties and their services were not available in Government hospitals.

5. Four Medical Officers were invalidated from the service, and two Medical Officers resigned. One Medical Officer's appointment was terminated. These losses have been partly made good, however, by the assumption of duty by three newly appointed Medical Officers.

6. Two Nursing Sisters were transferred on promotion as Senior Nursing Sisters to Sierra Leone and the Gambia respectively, while two Senior Nursing Sisters were transferred to the Gold Coast. One Senior Nursing Sister and one Nursing Sister retired during the year. One Sister was invalidated and six Nursing Sisters resigned. These losses were partially made good by the arrival of five newly appointed nursing sisters in the country.

7. Temporary Nursing Sisters have had to be employed to assist in several of the stations owing to sickness, resignations, retirements and the uncertainty of the date of return from leave of officers on the permanent establishment. The ladies on the Temporary Nursing Reserve were of great assistance during this period, and without their help the Medical Department would have found difficulty in efficiently running some of the hospitals.

8. Two additional posts for clerks and fifteen for Mental Nurses were filled during the year ; and nine Midwives have been appointed to the staff of the Maternity Hospital, Accra.

9. Recruits for the Services were initially examined by Medical Officers of the Department, but for various reasons fewer were seen during 1943. Although this resulted in a certain diminution in the volume of work, additional duties were undertaken. For example, the medical examination of discharged soldiers for pension was carried out by Medical Officers in the various districts, and the War Pension Assessment Board awarded and reviewed pensions based on the findings of the Medical Officers.

There has been close co-operation between all branches of the Medical Department and the corresponding units of the various Military Services in the Gold Coast. Mutual benefit has resulted.

10. Smallpox occurred sporadically throughout the year, but at no time assumed epidemic proportions. Eleven cases were discovered in the Dunkwa district in June. This small outbreak which was almost confined to the inhabitants of one house was quickly brought under control. Three cases occurred at Akuse, three at Parigu (South Gambaga), one at Abiriw, one at Akropong and one at Kumasi. None of these twenty cases ended fatally.

11. An outbreak of cerebro-spinal meningitis started early in February, 1943, in the Northern Territories. Three cases reported from Navrongo on February 4th were the precursors of a sharp epidemic which spread rapidly to Western Dagomba, South Mamprusi and to the Wa, Lawra and Tumu districts. This epidemic finally ended in July. There were 361 cases in all, 143 of which were fatal. A slight recrudescence occurred in November when six cases were reported with one death.

Other places affected were Kumasi with six cases, two being fatal ; Keta with two cases, one of which was fatal ; Dunkwa with one fatal case ; Akuse, Wenchi and Accra with one non-fatal case each, and Takoradi with three cases with one death. In all there were 382 cases with 149 deaths.

12. Two confirmed cases of yellow fever occurred in Africans during the year and both were, unfortunately, fatal. One case was a female child aged three years residing in Asuboi in the Nsawam district ; while the second was an African male aged 30 years. This case originated at Komenda in the Central Province of the Colony.

13. The proposal to undertake a survey of the incidence of tuberculosis in towns and villages throughout the Colony could not be put into effect owing to the difficulty of obtaining suitable X'ray equipment.

A tuberculosis ward was opened in Kumasi African Hospital and treatment by artificial pneumothorax, phrenic evulsion and other methods instituted. The results obtained from treatment were, except in a few instances, very unsatisfactory. This appeared to be due to the fact that most cases were not seen until in the advanced stages of the disease, and to a racial lack of resistance which was most evident in patients from the Northern Territory. Routine examinations of mine labourers for silicosis continued at Tarkwa on a small scale, and it is hoped to present shortly a final report on this condition.

14. Towards the end of the year preparations were made for the commencement of an active anti-yaws campaign early in 1944. A lorry, tentage and certain of the necessary drugs were obtained, and the selection of the required staff was commenced. The campaign, which will be partly curative and partly preventive, will start in the Yendi district of the Northern portion of the Mandated Area of Togoland. Yaws is very extensively present in this area. If the campaign meets with success, it is intended to extend activities later to other areas.

15. The Trypanosomiasis Campaign continued its work by giving mass treatment to cases and surveying areas for incidence of the disease.

The selective clearing of the Kamba valley has been a success as the number of tsetse flies in that district has been much reduced with a corresponding great reduction of sleeping sickness among the population. Previously 160 square miles of country remained depopulated, but now 52 families comprising 430 persons have settled on the cleared land. In addition, many farms have now been made in the valley by persons living in villages in the adjoining district. Grazing for cattle has also been made available in an area where it was previously impossible for cattle to exist owing to numbers of infected tsetse flies. A valuable area of agricultural land, capable of sustaining many families, has been reclaimed by this method ; and it is hoped that by farming the area the tract of land made suitable for habitation will be extended without much difficulty and at little further cost.

16. A Conference to discuss trypanosomiasis control was held in Lagos during July, 1943. The Directors of the British West African Colonies, or their representatives, together with delegates from neighbouring territories, and officers working on the trypanosomiasis problem discussed the existing situation.

The Conference came to the conclusion that although a certain degree of liaison between the territories represented did exist, it was incomplete, irregular and not of an intimate enough character. It was recommended that officers, working on Sleeping Sickness control in frontier districts, should have free facilities for personal contact with a view to conferring upon all matters affecting their work. It was also decided that arrangements should be made for closer personal contact through visits of individual field workers to other territories.

The questions of research and experiment were discussed and a sub-committee was formed to consider this aspect. A list of subjects for research was drawn up, but it was not thought feasible to allocate the work to different territories at present. To avoid duplication it was agreed that the various Governments should give information concerning any particular research work they proposed to carry out.

17. The simplification and unification of the procedure to be adopted in the exchange of epidemiological information was also studied, and various recommendations were made.

18. One female and two male Government medical scholars proceeded to the United Kingdom in 1943 to commence their studies, making a total of nine Government medical scholars. Two dental scholarships were also awarded ; and the two previously appointed Government dental scholars continued their studies in Britain. It is anticipated that one of the latter will qualify in 1944 and will be available for employment as a dental surgeon in the Department.

19. There was little new legislation of Medical and Health importance made during the year. Regulations made under Section 3 of the Quarantine Ordinance amended the procedure to be adopted in the case of passengers, who were not in possession of a certificate of immunity against yellow fever, arriving by aircraft at an airfield in the Gold Coast. The Regulations also dealt with passengers in transit, and admission to airfields.

20. The question of the introduction of legislation came under discussion with the object of prohibiting the advertisement of cures for venereal disease and debility arising from sexual excess. This measure is considered necessary, owing to the great number of these advertisements, to safeguard the public from exploitation. A Bill will be introduced in due course.

21. In September, 1943, the Department undertook the sale of quinine to the public in towns and villages in which there were Hospitals or permanent Dispensaries. It was previously sold at the post offices in these places, but in order to conserve the stocks of tablet quinine, the Department substituted the sale of liquid quinine at the same price. Through this procedure it is hoped to be able to continue the distribution of quinine to the public. It should be mentioned here that Government officials are no longer supplied with suppressive quinine, but are now issued with mepacrine.

22. Another year of steady progress with regard to Maternal and Child Welfare has been recorded, and the growing appreciation of this service is seen by the steadily increasing number of mothers and children attending the various centres. Particulars are given in Table (V).

## (II) IMPORTANT DISEASES TREATED DURING THE YEAR

23. Before the important diseases treated during the year are reviewed it has to be borne in mind that an appreciable percentage of the cases reported were diagnosed by dispensers temporarily in charge of small rural hospitals and of village dispensaries.

24. *Diseases of the Enteric Group* (1).—One hundred and sixty nine cases with sixteen deaths were treated compared with 134 cases with 19 deaths in 1942. It is considered that these figures do not give a true picture of the prevalence of diseases of this group.

25. *Smallpox* (5).—A total of six cases with no deaths were treated in established hospitals. It will be appreciated that smallpox cases are usually treated in bush hospitals, often in very isolated rural areas. In 1942 a total of 161 cases with four deaths were treated.

26. *Diseases of the Dysenteric Group* (12).—One thousand eight hundred and forty-three cases were treated. Of this total 56 proved fatal. The amoebic variety was responsible for 815 of the total number of cases reported with 18 deaths.

27. *Cerebro-spinal Fever* (16).—Two hundred and sixty-two cases with 38 deaths were treated compared with one hundred and thirty-five cases with ten deaths in 1942. As in the case of smallpox, most cases of cerebro-spinal fever are treated in improvised bush hospitals usually far removed from the larger centres of population.

28. *Rabies* (17).—Twelve cases with one death were reported in 1943, compared with twenty cases with four deaths in 1942.

29. *Tetanus* (18).—One hundred and fifty-nine cases with 48 deaths were reported. In 1942, the total was 144 cases with 40 deaths. In tetanus, as also in rabies, the percentages of deaths to cases are apt to be misleading for there is a great tendency for patients to be removed from hospital by friends and relatives before the fatal end.

30. *Tuberculosis of the Respiratory System* (19).—As in previous years, pulmonary tuberculosis accounted for the highest percentage of deaths due to a single disease entity. Two thousand one hundred and six cases with three hundred and thirty-four deaths were treated, compared with one thousand nine hundred and eighty-four cases with three hundred and two deaths in 1942. The percentage of deaths due to pulmonary tuberculosis to total deaths from all causes resulting in hospitals was 13·2, compared with 13·7 in the previous year. Of the total deaths recorded in 1943, i.e. 334, three hundred and five, or 91 per cent were males. In the registration areas of the Gold Coast, comprising about one tenth of the total population, pulmonary tuberculosis accounted for 10·5 per cent of the total deaths registered. There can be little doubt that pulmonary tuberculosis is one of the most important, if not the most important, problem for the future. Pulmonary tuberculosis is not a well-advertised disease and does not receive the publicity afforded to such diseases as yellow fever and trypanosomiasis. In the Annual Report of 1932-33 the following appeared:—

“The problem remains one of the most important to be faced. The causes for the high incidence of this disease are not far to seek. Insanitary housing, overcrowding, exposure, a vitamin-deficient dietary, lack of immunity, predisposing debilitating diseases, uncleanly habits and a total ignorance of the rudimentary laws of hygiene are all important factors.

“The opinions of medical and health officers are almost equally divided as to whether the disease is really on the increase or not. In the larger centres it would seem that the disease is just being “held,” the race between pulmonary tuberculosis and improved sanitation being very close. It is possible that a degree of immunity is in process of being purchased “at a price.” In the less advanced rural areas a slow increase may be taking place, the source of infection often being returned ex-mine labourers.”

In our present state of knowledge little more can be added.

31. *Other tubercular diseases* (20).—Two hundred and eighty-nine cases of tubercular disease, other than pulmonary tuberculosis, were treated during the year with 35 deaths. This total yielded a percentage of 12·1 to the total for all forms of tuberculosis. In 1942 the percentage was 17·6.

32. *Leprosy* (21).—Seven hundred and thirty-two in-patients and 421 out-patients were treated compared with 733 and 488 in 1942. Leper settlements are situated at Ho, Accra, Kumasi and Yendi. Ho is the most important of these settlements. In 1943 some 462 in-patients were treated in the Ho settlement. Of this total, improvement was recorded in 205 cases and complete arrest in 42 cases.

33. *Venereal diseases* (22).—Nine hundred and sixty-three cases of syphilis with 18 deaths were treated during the year compared with 888 cases with seven deaths in 1942. Gonorrhoea and its complications accounted for 9,156 cases, with 21 deaths. In 1942 some 8,866 cases with 16 deaths were recorded. These figures include those of the special Venereal Diseases Clinic at the Gold Coast Hospital, Accra.

34. *Yellow fever* (23).—One confirmed case only was treated in hospital during the year. A second case was recorded but was treated in a military hospital. It, also, was confirmed. The cases comprised one male and one female. Both were fatal.

35. *Malaria* (24).—Forty-seven thousand and fifty-four cases with 119 deaths were treated during the year under review. In 1942 some 38,331 cases with 88 deaths were treated. The percentage of deaths, to all deaths occurring in hospital was 4·7, compared with a percentage of four for the previous year. The comparatively large increase in the number of cases of malaria treated was due, partly at least, to the following reasons. Tabloid quinine is now no longer on sale at the Post Offices in those centres possessing both a post office and a hospital, or a dispensary. In such centres people desiring to obtain quinine go to the hospital, or dispensary and purchase the required quinine in liquid form. Those arriving at the hospital and showing signs of active malaria are, naturally, treated for their condition.

Again, organised labour is an ever increasing source of cases of malaria. There may be no actual increase in the incidence of the disease, but there is no doubt that medical aid is increasingly sought during an attack. In several stations in the North medical officers stressed the increased demand for medical aid for the condition. It would seem, from all sources of information available, that there was an actual increase in the incidence of malaria in 1943.

36. *Blackwater fever* (25).—Fifty-six cases with seven deaths were treated compared with 78 cases with 12 deaths in the previous year. The total cases treated represent 0·4 per cent of all cases of subtertian malaria recorded during the year.

37. *Trypanosomiasis* (27).—During the year 3,610 cases were treated with 125 deaths compared with a total of 3,948 cases and 127 deaths for the previous year. The percentage of deaths to total deaths occurring in hospital was 4·9. In 1942 the percentage was 5·6.

38. *Yaws* (28).—As surmised in the report of last year, there was another large increase in the number of yaws cases treated. A total of 143,336 cases was treated compared with 95,935 cases in 1942, i.e. an increase of 47,401. Yaws has now been a free treatment disease for the past two years, and further large increases in the total number of cases treated are to be expected.

39. *Helminthic diseases* (30, 31 and 32).—Of the helminthic diseases ankylostomiasis accounted for 1,596 cases with 34 deaths compared with 1,478 cases with 15 deaths. Schistosomiasis yielded a total of 1,070 cases with two deaths compared with 1,190 cases with a similar number of deaths. Other helminthic diseases produced a total of 4,996 cases with 14 deaths, compared with 5,104 cases with two deaths in the previous twelve-monthly period.

40. *Cancer and other tumours* (34).—Malignant tumours were responsible for 157 cases with 17 deaths, compared with 101 cases and 20 deaths in 1942. Non-malignant tumours accounted for 943 cases with 13 deaths compared with 730 cases with one death.

41. *Rheumatic conditions* (35).—Some 10,457 cases with three deaths were recorded, compared with 9,034 cases with no death in 1942. Probably yaws and gonorrhoea play not an unimportant part in the production of cases of this group.

42. *Nutritional diseases* (37), (38), (39) and (40).—For the purposes of comparison the nutritional diseases treated during the year under review and in 1942 are shown below in tabular form:—

TABLE I

			1942		1943		Decrease
			Cases	Deaths	Cases	Deaths	
Scurvy (37) ...	...	...	20	—	14	—	—6
Beriberi (38)	...	...	40	4	22	3	—18
Pellagra (39)	...	...	322	4	54	4	—268
Other nutritional diseases (40)	...	...	1,001	49	1,347	27	+346
Total	...	...	1,383	57	1,437	34	+54

There was a slight increase in the total number of cases of nutritional disorders treated in 1943. There was a considerable decrease in the number of cases of pellagra reported, and an, approximately, equivalent increase in the number of "other nutritional diseases" recorded. Of the total of 1,437 cases of "other nutritional diseases," the infant clinics were responsible for the majority. This is not surprising for nutritional disorders loom very largely among the very young, particularly at weaning time and the years following. Ignorance and the absence of a local dairy industry are factors of importance in the production of such disorders.

A medical officer in the Northern Territories briefly sums up the position. He writes: "Malnutrition is still common, and still qualitative rather than quantitative in type. Milk, when obtainable during part of the year, and eggs are used to a certain extent, but not so much or as often as they could be with the adequate supplies, especially of eggs, at their disposal." He stresses the difficulty of introducing new and more continuous crops, and the importance of the educational factor in the improvement of diet generally. Certain medical officers in the North draw attention to the strong robust and healthy appearance of the locally recruited soldier returning home on leave. It is considered that the returning ex-soldier may well prove an important factor in the future in the breaking down of local dietary prejudices.

43. *Affections of the respiratory system (Bronchitis and the pneumonias) (49, 50 and 51)*.—Bronchopneumonia accounted for 744 cases with 85 deaths. Lobar pneumonia for 1,025 cases with 101 deaths; and "otherwise defined" pneumonias for 894 cases with 55 deaths. The total number of bronchitis cases was 19,948 with 14 deaths. "Other diseases of the respiratory system" were responsible for 4,665 cases with 20 deaths. The total number of cases of this "disease group" was 27,276 with 275 deaths. The total number of deaths which ensued yielded a percentage of 10·8 to the total number of deaths occurring in hospital. The percentage for 1942 was 8·2.

44. *Nephritis, all forms* (58).—One thousand one hundred and thirty-three cases with 86 deaths were treated, compared with a total of 946 cases and 92 deaths in 1942. In a country where yellow fever is endemic acute nephritis assumes an importance not elsewhere attained.

45. *Pregnancy, child birth, etc.* (60).—Some 66,541 cases were recorded, an increase of 8,833 over the total for the preceding year. The attendances of expectant mothers at the various welfare clinics are included in these figures.

## (III) VITAL STATISTICS

## (i) GENERAL POPULATION :

TABLE II

										1943	Total number registered
Total estimated population	...	...	...	...	...	...	...	...	3,962,692	—	—
Estimated population of registration areas	...	...	...	...	...	...	...	...	355,780	—	—
Birth-rate (weighted average) per 1,000 persons living	...	...	...	...	...	...	...	...	35·7	12,983	12,983
Death-rate (weighted average) per 1,000 persons living	...	...	...	...	...	...	...	...	28·7	10,449	10,449
Infantile mortality-rate	...	...	...	...	...	...	...	...	129	1,670	1,670
Still birth-rate per 1,000 total births	...	...	...	...	...	...	...	...	68	881	881
Maternal mortality-rate per 1,000 total births	...	...	...	...	...	...	...	...	16·0	222	222
Deaths from respiratory diseases (general) per 1,000 deaths registered	...	...	...	...	...	...	...	...	137	1,435	1,435
Deaths from pulmonary tuberculosis per 1,000 deaths registered	...	...	...	...	...	...	...	...	105	1,094	1,094
Deaths from intestinal diseases per 1,000 deaths registered	...	...	...	...	...	...	...	...	78	810	810
Deaths from malaria per 1,000 deaths registered	...	...	...	...	...	...	...	...	103	1,081	1,081
Deaths due to starvation	...	...	...	...	...	...	...	...	—	27	27

46. No census has been taken since the 1931 decennial census. The estimated population can therefore only be regarded as liable to increasing error.

The birth-rate rose from 35·3 in 1942 to 35·7 in 1943. The death-rate rose from 26·5 in 1942 to 28·7. The infantile mortality-rate rose from 118 in 1942 to 129 in 1943. The still birth-rate rose from 56 in 1942 to 68 in 1943. The maternal mortality-rate rose from 15·1 in 1942 to 16·0. Deaths from respiratory diseases rose from 119 in 1942 to 137 in 1943 per 1,000 deaths registered. Deaths from pulmonary tuberculosis fell from 112 to 105 per 1,000 deaths registered. Deaths from intestinal diseases fell from 85 to 78 per 1,000 registered. Deaths from malaria rose from 93 to 103 per 1,000 deaths registered. Deaths from starvation increased from a total of 23 in 1942 to 27 in 1943.

## (ii) GENERAL EUROPEAN POPULATION :

47. The following table gives particulars of the civil European population during the year:—

TABLE III

					Official	Non-official	Total
Number of Europeans resident	...	...	...	...	817	2,560	3,377
Number invalided	...	...	...	...	41	54	95
Number of deaths	...	...	...	...	1	6	7

The total number of European residents fell from 3,467 to 3,377, i.e. by 90. The number of invalidings rose from 82 to 95. The number of deaths showed a gratifying fall from 30 to a total of 7.

The cause of the death of the one European official who died was intestinal obstruction due to old appendicitis adhesions. The causes of the invaliding of European officials were: insomnia, debility and nervous manifestations (12) ; malaria (5) ; duodenal ulcer (5) ; debility (3) ; anaemia (3) ; entero-colitis (1) ; pulmonary tuberculosis (1) ; furunculosis (1) ; syphilis tertiary (1) ; trypanosomiasis (1) ; fracture thoracic vertebrae (1) ; cholecystitis (1) ; prostatitis (1) ; gastro-enteritis (chronic) (1) ; enteric fever (1) ; haemoptysis (1) ; hepatitis (1) ; dermatitis (1).

The causes of death of the six non-official Europeans who died were: heart disease ; septicaemia ; enteric fever ; entero-colitis ; lobar pneumonia and carcinoma of the pancreas.

The principal causes of the 54 invalidings of non-official Europeans were: malaria (9) ; nervous conditions (6) ; duodenal ulcer (4) ; debility (4) ; pulmonary tuberculosis (2) ; blackwater fever (2), and anaemia (2).

## (iii) OFFICIAL AFRICAN POPULATION :

TABLE IV

Number resident	Number invalided	Number of deaths
4,801	37	14

48. The number of official Africans rose from 4,620 to 4,801. The number of invalidings showed a gratifying fall from 47 to 37 ; and the number of deaths from 17 to 14.

The causes of the fourteen official African deaths were: pulmonary tuberculosis (4) ; enteric fever (2) ; blackwater fever ; cerebral haemorrhage ; acute general peritonitis ; lobar pneumonia ; chronic interstitial nephritis ; malaria, uraemia and infective hepatitis ; one each. The principal causes of invaliding were: defective vision (7) ; pulmonary tuberculosis (4) ; hyperpiesis (3) ; bronchial carcinoma (2) ; insanity (2) ; myocarditis (2).

## (IV) HYGIENE AND SANITATION

## LABOUR CONDITIONS :

49. There was an increase in the basic rate of pay for labourers in Government employment in Tamale, and a temporary cost-of-living bonus was granted to Government and Native Administration labour in the Western Dagomba, and the Gonja Districts of the Northern Territories.

During the year there were large unavoidable fluctuations in the labour force employed in various undertakings. Through the good offices of the Labour Department these changes were carried through with a minimum of hardship, and there would appear to have been little permanent unemployment.

Reported deaths from starvation were negligible, 27 as against 23 in 1942.

#### HOUSING AND TOWN PLANNING :

50. Bad housing and overcrowding, particularly in the large centres of population, constitutes one of the major problems of health and social welfare. Some progress was made in the Sekondi-Takoradi area by the building of a labour estate. Approximately 700 quarters of permanent and approved type were erected on the estate. Provision was also made for drainage, conservancy and other public health services of a modern type. Elsewhere including the Mining Areas there is little progress to record, due chiefly to the difficulty in obtaining suitable building materials.

#### SEWAGE DISPOSAL :

51. Slow but steady progress has been made towards the replacement of pan and pit latrines wherever the water supply permits, by an approved type of septic tank latrine. Proper water borne sewage systems are long overdue for the large towns possessing adequate pipe borne water supplies. Experiments still continue with Bore hole latrines, which appear to be of value under certain limited conditions.

#### REFUSE DISPOSAL :

52. There is little improvement to record. Incineration is largely the method of choice in most towns and villages, but considerable progress has been made in the more extensive use of the method of composting refuse, especially in the Northern Territories.

#### WATER SUPPLIES :

53. Improvement and extension of water supplies is still one of the outstanding needs of the Gold Coast particularly in the Northern Territories. Little beyond maintenance and repairs to existing supplies has been possible during the year under review.

#### FOOD IN RELATION TO HEALTH AND DISEASE :

54. There has been no real shortage of food and as far as can be ascertained there has been no appreciable increase in malnutrition or food deficiency diseases since the outbreak of war. Markets and slaughter houses are controlled and inspected by Health or Municipal Inspectors. Particular attention has been devoted to the diets of school children, especially in the Northern Territories.

#### MOSQUITO CONTROL :

55. The very extensive anti-malarial drainage measures in the Takoradi-Sekondi area were completed during the year, and the maintenance of the completed scheme was placed under the control of the Civil Authorities. The regular house spraying instituted during the previous year continued throughout the wet season. The preliminary analysis of data indicates a very considerable improvement in the malaria morbidity rate for the inhabitants of the area embraced by the scheme. A similar scheme was commenced for the Accra area and is rapidly approaching completion.

Elsewhere continuous efforts were made to extend and improve control. Three hundred and fifty thousand and ten yards of new earth drains were dug and graded and 1,992,008 yards of existing earth drains were maintained and re-graded. Only a very limited amount of concrete and subsoil draining could be undertaken. In addition filling, oil spraying and the use of other larvicides continued to play their part

The check on domestic mosquito breeding continued to be an important part of the work of the Health Branch inspectorate. During the year 3,097,730 house and compound inspections were made. Mosquito larvae were found on 10,113 occasions giving a larval index of 0.33 for those areas of the country under sanitary control.

#### SCHOOL HYGIENE :

56. There is no organised School Medical Service, but in the Northern Territories, medical officers have conducted a six monthly medical inspection of the pupils of the Native Administration schools. A standard system of inspection was used, and interesting and useful comparative data obtained. A medical examination of the children attending two of the largest Kumasi schools was also undertaken by the Medical Officer of Health, Kumasi.

#### VACCINATION :

57. During the year 285,296 vaccinations against smallpox were performed. Of 85,224 cases examined later 91.05 per cent proved successful. A large proportion of the inhabitants of the Gold Coast are now protected by vaccination against smallpox.

### II—SPECIAL SERVICES

#### (V) PORT HEALTH AND AIR TRAFFIC.

58. No port or airport was declared infected during the year.

#### (VI) MATERNITY AND CHILD WELFARE

59. The following table shows the work carried out at the various established welfare centres during the year :—

TABLE V

Type of Centre	ATTENDANCES			
	Children	Expectant Mothers		
Government Centres	...	...	...	...
Red Cross Centres	...	...	...	...
Mission Centres	...	...	...	...
Total	...	...	...	...
	48,941	22,076		
	41,579	29,838		
	59,074	2,929		
	149,594	54,843		

In 1942 the figures for the attendance of children and expectant mothers were 142,993 and 49,104 respectively. The general overall increase of attendances at the clinics demonstrates the increasing confidence of the public in this important aspect of preventive medicine.

In Accra and Kumasi where well organised weighing centres exist, the total attendances at these centres was 109,644 compared with 97,175 in 1942.

#### (VII) HOSPITALS, DISPENSARIES, LABORATORIES, ETC.

60. There are 38 Government Hospitals in the Gold Coast and its Dependencies. Of these 33 are African and five are European Hospitals. There is, also, a small European annexe attached to the African Hospital, Cape Coast. The African Hospitals accommodate 1,373 beds and 155 cots ; the European Hospitals accommodate 98 beds.

Return A of this report shows the diseases treated during the year at all Government Hospitals and Dispensaries grouped under 65 heads.

The total number of in-patients treated was 32,873 an increase of 1,744 over the total for 1942. The Hospitals mainly responsible for the increases were the Gold Coast Hospital, Accra ; Koforidua African Hospital ; Maternity Hospital, Accra ; Sekondi African Hospital ; Dunkwa African Hospital ; Cape Coast African Hospital and Tamale African Hospital.

The total number of out-patients treated was 461,582 yielding an increase of 91,347 over the total for 1942. Most of the increase was due to the large increase in the number of yaws cases seen and treated. The Hospitals showing the largest increase in the number of out-patients treated were the Gold Coast Hospital, Accra ; Koforidua African Hospital ; Nsawam African Hospital ; Kibi African Hospital ; Maternity Hospital, Accra ; European Hospital, Accra ; Oda African Hospital ; Sekondi African Hospital ; Winneba African Hospital ; Saltpond African Hospital ; Cape Coast African Hospital ; Kumasi African Hospital ; Salaga African Hospital ; Sandema Dispensary ; Fian and Hian Dispensaries and the Kumasi Infant Welfare Centre.

The total number of deaths occurring in hospital was 2,536 yielding a percentage of 7.7 to the total number of in-patients treated. The percentage in 1942 was 7.1.

61. There are 33 village dispensaries dispersed throughout the Gold Coast, usually in isolated rural areas. They are in charge of trained dispensers, and they are visited as often as possible by the medical officers of the districts. Under present conditions they cannot be visited as often as desired. During 1943 some 80,858 persons were treated at these Village Dispensaries compared with a total of 68,291 in 1942. Again the increase was chiefly due to the large increase in the number of yaws cases treated.

62. The Medical Research Institute carried out 34,695 bacteriological, pathological and chemical examinations. Three hundred and thirty one post-mortem examinations were made. These totals show a considerable increase over those for 1942, i.e. 29,795 and 237 respectively.

63. During the year the Chemical Laboratory examined 622 samples of various kinds including visceral contents, medicines, spirits and other alcoholic beverages, water, fabrics, etc. This is a decrease of 190 analyses compared with 1942. In November material was examined in connection with two fatal poisoning cases following the eating of wild yam (probably *Dioscorea bulbifera*). Specimens of the yam were fed to chickens and it proved fatal to them : attempts to isolate the toxic substance, however, have not so far been successful.

64. The Government Dental Surgeon treated 5,183 persons, both official and non-official.

#### (VIII) TRAINING OF MEDICAL AND HEALTH PERSONNEL

65. The training of junior medical staff, as in the past, was undertaken at the principal hospitals. Twelve Gold Coast Certificates of Nursing were granted.

66. Examinations for the Pharmaceutical Diploma of the Gold Coast were held in January and July. At the January Examination five candidates, all privately trained, presented themselves for examination. Two were successful. In the July examination there were four entrants, one of whom was successful. Those four entrants were, also, privately trained.

67. Forty-three pupil midwives were in training at the Maternity Hospital during the year. Eleven candidates passed the examination of the Midwives' Board, and became Registered Midwives.

68. The School at Tamale for Sanitary Overseers for the Native Administration was re-organised during the year, and extended to make provision for the training of Native Administration vaccinators.

69. Health Visitors, as previously, were trained at the Princess Marie Louise Welfare Centre, Accra. Four candidates obtained the Health Visitors Certificate.

70. During the year the whole question of the training of African Staff came up for review. A scheme was elaborated for the training of African female nurses to fit them to fill the highest nursing posts; and premises suitable for a Nurses School and Hostel were obtained in Kumasi. Alterations to the buildings were taken in hand towards the end of the year.

71. It is intended, also, to broaden the curriculum for the training of dispensers, and give a more-scientific bias to their course.

72. An intensive course of training was, also, drawn-up for the training of Health inspectorate staff. But since the post of Training Officer has been in abeyance, it has been found difficult to make a serious start owing to the difficulty, under present conditions, of ensuring that two experienced sanitary superintendents are stationed in Accra.

### III—FINANCE

73. The following table shows the ordinary recurrent expenditure for the Medical Department (General, Health and Research Branches) for the first ten months of the year 1943:—

Branch							Actual Expenditure 1/1/43 to 31/10/43
Medical ... ... ... ... ... ...							£ 211,115
Health ... ... ... ... ... ...							139,911
Research ... ... ... ... ... ...							4,596
Total ... ... ... ...							£ 355,622
Total Colony ... ... ...							£3,619,087
Percentage of total to Colony total for period 1/1/43 to 31/10/43 ... ... ...							9.83%

74. The expenditure on medical services does not include the cost of buildings, water supplies, town improvements and other public works of health importance.

J. M. MACKAY  
*Ag. Director of Medical Services.*

## RETURN A

## Return of Diseases and Deaths (In-patients) and Diseases (Out-patients) for the Year 1943

Diseases	Remaining in hospital on 31st Dec. 1942	IN-PATIENTS						OUT-PATIENTS		
		Yearly Total				Total cases treated	Remaining in hospital on 31st Dec. 1943	Males	Females	
		Admissions		Deaths						
		Males	Females	Males	Females					
1. (a) Typhoid fever ... ...	11	70	39	11	4	120	7	22	14	
(b) Paratyphoid fever ... ...	—	—	1	—	—	1	—	—	1	
(c) Type not defined ... ...	—	9	2	—	1	11	2	—	—	
2. Typhus fever ... ...	—	12	—	—	—	12	1	3	2	
3. Relapsing fever ... ...	—	—	—	—	—	—	—	—	—	
4. Undulant fever ... ...	—	—	—	—	—	—	—	—	—	
5. Smallpox ... ...	—	4	—	—	—	4	—	2	—	
6. Measles ... ...	1	40	28	3	3	69	—	477	382	
7. Scarlet fever ... ...	—	17	17	1	5	34	—	1	—	
8. Whooping cough ... ...	—	4	9	—	—	13	—	763	746	
9. Diphtheria ... ...	—	—	—	—	—	—	—	8	17	
10. Influenza :—										
(a) with respiratory complications ... ...	—	61	9	—	—	70	—	118	50	
(b) without respiratory complications ... ...	—	33	3	1	—	36	—	223	60	
11. Cholera ... ...	—	—	—	—	—	—	—	—	—	
12. Dysentery :—										
(a) Amœbic ... ...	3	207	63	10	8	273	7	385	157	
(b) Bacillary ... ...	4	83	35	15	7	122	1	91	66	
(c) Unclassified ... ...	4	44	14	12	4	62	—	410	277	
13. Plague :—										
(a) Bubonic ... ...	—	—	—	—	—	—	—	—	—	
(b) Pneumonic ... ...	—	—	—	—	—	—	—	—	—	
(c) Septicæmic ... ...	—	—	—	—	—	—	—	—	—	
14. Acute poliomyelitis ... ...	1	1	—	—	—	2	—	1	1	
15. Encephalitis lethargica ... ...	—	2	—	1	—	2	—	—	—	
16. Cerebro-spinal fever ... ...	—	62	33	25	13	95	1	86	81	
17. Rabies ... ...	—	—	1	—	1	1	—	10	—	
18. Tetanus ... ...	4	48	38	26	22	90	2	41	28	
19. Tuberculosis of the respiratory system	74	536	82	305	29	692	40	1,119	295	
20. Other tuberculous diseases ... ...	19	100	35	27	8	154	32	93	—	
21. Leprosy ... ...	525	141	66	30	15	732	591	293	1	
22. Venereal diseases :—										
(a) Syphilis ... ...	37	114	15	16	2	166	10	574	123	
(b) Gonorrhœa, complications and sequelæ ... ...	26	984	189	18	3	1,199	37	6,240	1,71	
(c) Other V. D. ... ...	10	332	75	5	—	417	9	1,104	26	
23. Yellow fever ... ...	—	—	1	—	1	1	—	—	—	
24. Malaria :—										
(a) Benign tertian ... ...	—	5	—	—	—	5	—	124	20	
(b) Subtertian ... ...	20	1,533	401	35	28	1,954	21	8,030	3,33	
(c) Quartan ... ...	—	143	75	—	—	218	—	540	32	
(d) Unclassified ... ...	17	702	209	31	25	928	9	19,059	12,500	
25. Blackwater fever ... ...	7	16	12	6	1	35	—	12	9	
26. Kala-azar ... ...	—	—	—	—	—	—	—	—	—	
27. Trypanosomiasis ... ...	270	887	350	98	27	1,507	198	1,452	651	
28. Yaws ... ...	19	134	54	—	—	207	12	79,611	63,518	
29. Other protozoal diseases ... ...	—	2	1	—	—	3	—	204	167	
30. Ankylostomiasis ... ...	5	238	53	25	9	296	5	910	390	
31. Schistosomiasis ... ...	4	110	24	1	1	138	2	739	193	
32. Other helminthic diseases ... ...	8	330	63	7	7	401	16	2,864	1,731	
33. Other infectious and/or parasitic diseases ... ...	10	381	57	2	—	448	30	1,053	684	
34. Cancer and other tumours :—										
(a) Malignant ... ...	1	44	24	14	3	69	4	62	26	
(b) Non-malignant ... ...	3	133	187	3	10	323	8	348	272	
(c) Undetermined ... ...	—	14	2	—	—	16	—	72	34	
35. Rheumatic conditions :—										
(a) Rheumatic Fever ... ...	—	—	—	—	—	—	—	—	—	
(b) Other rheumatic conditions ... ...	2	114	33	1	2	149	3	7,083	3,225	
36. Diabetes ... ...	2	18	7	—	—	27	2	36	16	
37. Scurvy ... ...	—	—	—	—	—	—	—	11	3	
38. Beriberi ... ...	—	6	—	3	—	6	—	9	7	
39. Pellagra ... ...	—	7	6	2	2	13	—	22	19	
40. Other diseases :—										
(a) Nutritional ... ...	6	73	45	19	8	124	5	622	601	
(b) Endocrine glands and general ... ...	5	24	27	—	1	56	1	179	95	
41. Diseases of the blood and blood-forming organs ... ...	15	225	152	39	23	392	17	1,065	934	
42. Acute and chronic poisoning ... ...	—	34	20	8	5	54	1	19	8	
43. Cerebral haemorrhage ... ...	4	33	14	20	6	51	3	28	6	
44. Other diseases of the nervous system	579	337	123	45	21	1,039	472	1,297	612	
45. Trachoma ... ...	1	19	6	—	—	26	1	76	35	
46. Other diseases of the eye and annexa	28	293	215	—	1	536	11	7,491	5,471	
47. Diseases of the ear and mastoid sinus	8	129	65	1	1	202	4	3,111	1,597	
Carried forward ... ...	1,733	8,888	2,980	866	307	13,601	1,565	148,193	101,050	

RETURN A—*contd.*Return of Diseases and Deaths (In-patients) and Diseases (Out-patients) for the Year 1943—*contd.*

Diseases	Remaining in hospital on 31st Dec. 1942	IN-PATIENTS						OUT-PATIENTS	
		Yearly Total				Total cases treated	Remaining in hospital on 31st Dec. 1943	Males	Females
		Admissions		Deaths					
		Males	Females	Males	Females				
<i>Brought forward</i> ... ...	1,733	8,888	2,980	866	307	13,601	1,565	148,193	101,050
48. Diseases of the circulatory system :—									
(a) Heart diseases ... ...	9	236	85	96	24	330	16	446	224
(b) Other circulatory diseases ...	8	47	25	9	4	80	1	648	305
49. Bronchitis ... ... ...	14	246	89	8	6	349	10	11,960	7,639
50. Pneumonia :—									
(a) Broncho-pneumonia ... ...	5	172	122	59	26	299	5	273	172
(b) Lobar-pneumonia ... ...	12	459	126	77	24	597	10	306	122
(c) Otherwise defined ... ...	4	306	69	39	16	379	18	338	177
51. Other diseases of the respiratory system ... ... ...	21	296	110	15	5	427	19	2,880	1,358
52. Diarrhoea and enteritis :—									
(a) Under 2 years of age ... ...	2	47	34	4	6	83	3	1,656	1,339
(b) Over 2 years of age ... ...	5	381	111	40	7	497	4	2,429	1,302
53. Appendicitis ... ... ...	3	50	19	5	1	72	1	62	18
54. Hernia, intestinal obstruction ...	29	670	32	47	8	731	46	853	54
55. Cirrhosis of the liver ... ...	3	55	13	34	1	71	7	57	14
56. Other diseases of the liver and biliary passages ... ... ...	3	185	46	35	9	234	6	359	239
57. Other diseases of the digestive system	33	580	234	37	20	847	25	17,538	7,589
58. Nephritis (all forms) :—									
(a) Acute ... ... ...	3	46	27	10	10	76	2	173	74
(b) Chronic ... ... ...	8	188	45	48	18	241	10	263	206
59. Other non-venereal diseases of the genito-urinary system ... ...	35	818	434	33	11	1,287	71	1,931	3,733
60. Pregnancy, child-birth, and the puerperal state (including normal labour and maternal welfare) ... ...	64	—	2,570	—	100	2,634	75	—	61,869
(a) Abortion ... ... ...	5	—	444	—	16	449	9	—	410
(b) Ectopic gestation ... ...	1	—	39	—	7	40	2	—	11
(c) Toxæmias of pregnancy ...	—	—	56	—	6	56	—	—	56
(d) Other conditions of the puerperal state ... ... ...	7	—	377	—	39	384	14	—	632
61. Diseases of the skin, cellular tissue, bones and organs of locomotion ...	351	4,045	988	116	41	5,384	247	42,809	19,446
62. Congenital malformations and diseases of early infancy (including infant welfare) ... ... ...	11	50	43	9	14	104	3	1,426	1,438
(a) Congenital debility (children under 1 year) ... ... ...	2	15	19	5	6	36	—	209	198
(b) Premature birth (children under 1 year) ... ... ...	4	36	43	19	19	83	2	74	84
(c) Injury at birth (children under 1 year) ... ... ...	1	6	13	2	3	20	—	23	43
63. Senility ... ... ...	16	20	5	9	4	41	8	53	45
64. External causes :—									
(a) Suicide ... ... ...	1	1	—	1	—	2	—	10	1
(b) Other forms of violence ...	127	1,782	400	99	28	2,309	145	8,838	2,123
65. Ill-defined ... ... ...	35	764	331	16	12	1,130	30	3,947	1,857
Total ... ...	2,555	20,389	9,929	1,738	798	32,873	2,354	247,754	213,828



